

PATENT  
Attorney Docket No. 43048.830002.US0  
Express Mail No. EL948575697US

We claim:

1. A tubular member comprising:  
a sidewall formed into a tubular configuration;  
the sidewall having a first end and a second end opposed to the first end;  
an attachment lip located proximate the first end;  
5 an attachment overlap located proximate the second end;  
the attachment lip substantially parallel to the attachment overlap when  
the sidewall is formed into the tubular configuration;  
a seal to join the attachment lip and the attachment overlap in a sealing  
relationship such that a closed, tubular member is formed.

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2. The member according to claim 1, wherein the seal comprises an adhesive layer between the attachment lip and the attachment overlap.

3. The member according to claim 2, wherein the adhesive layer is 5 comprises of at least one of a glue, a tape, an epoxy, a resin, a silicone, and an acrylic.

4. The member according to claim 2, wherein the seal further 10 comprises a mechanical fastener extending from the attachment overlap, through the adhesive layer, and to the attachment lip.

5. The member according to claim 4, wherein the mechanical fastener comprises at least one of a screw, a bolts, a nut, a washer, a rivet, a pin, and a nail.

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6. The member according to claim 1, wherein the seal comprises a mechanical fastener extending from the attachment overlap to the attachment lip such that the attachment overlap and attachment lip are joined in a sealing relationship.

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7. The member according to claim 1, wherein the seal comprises: a first end extension on the attachment lip, the first end extension comprising a protrusion; and a second end extension on the attachment overlap, the second end extension comprising a protrusion, wherein 25 the protrusions engage in a sealing relationship.

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8. The member according to claim 7, wherein the seal further comprises at least one of an adhesive layer and a mechanical fastener.

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9. A tubular member comprising:
  - a sidewall formed into a first configuration;
  - the sidewall having a first end and a second end opposed to the first end;
  - an attachment lip located proximate the first end;
  - an elastically loaded attachment overlap having a first position and a second position;
    - the elastically loaded attachment overlap being in the first position when the sidewall is configured in the first configuration;
    - the elastically loaded attachment overlap being elastically deformed into the second position such that the sidewall is configured in a second configuration corresponding to the shape of the tubular member;
    - the attachment lip and the elastically loaded attachment overlap being substantially aligned when the elastically loaded attachment overlap is in the elastically deformed second position;
  - the elastically deformed second position supplying a seating force to join the attachment lip and the attachment overlap in a sealing relationship such that a closed, tubular member is formed.

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10. The member according to claim 9, further comprising:  
an adhesive layer between the attachment lip and the elastically loaded  
attachment overlap when the elastically loaded attachment overlap is in the  
elastically deformed second position.

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11. The member according to claim 9, further comprising:  
a mechanical fastener extending from the attachment lip to the elastically  
loaded attachment overlap when the elastically loaded attachment overlap is in  
the elastically deformed second position.

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12. The member according to claim 10, further comprising a  
mechanical fastener extending from the attachment lip through the adhesive layer  
to the elastically loaded attachment overlap.

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13. The member according to claim 9, further comprising:  
a first end extension coupled to the attachment lip;  
the first end extension comprising a first protrusion;  
a second end extension coupled to the elastically loaded attachment  
overlap; and

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the second end extension comprising a second protrusion, wherein  
the first protrusion and the second protrusion engage in the sealing  
relationship when the elastically loaded attachment overlap is in the elastically  
deformed second position.

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14. The member according to claim 13, further comprising at least one  
of an adhesive layer and a mechanical fastener.

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15. A tubular member comprising:

- a sidewall formed into a tubular configuration;
- the sidewall having a first end and a second end opposed to the first end;
- an attachment lip located proximate the first end;
- 5 an attachment overlap located proximate the second end;
- the attachment lip substantially parallel to the attachment overlap when the sidewall is formed into the tubular configuration;
- means for sealing the attachment lip and the attachment overlap in a seal relationship to form a closed, tubular member.

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16. A method of constructing a tubular member, the method comprising the steps of:

forming a tubular member such that the tubular member has an attachment lip and an attachment overlap substantially aligned;

5 placing an adhesive layer such that the adhesive layer resides between the attachment lip and the attachment mechanism; and

curing the adhesive layer such that a seal is formed joining the attachment lip and the attachment overlap in a sealing relationship wherein a tubular member is formed.

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17. The method according to claim 16, wherein the step of placing the adhesive layer places a continuous adhesive layer.

18. The method according to claim 16, wherein the step of placing the  
5 adhesive layer places a noncontiguous adhesive layer.

19. The method according to claim 16, wherein the step of placing the adhesive layer is accomplished at part of forming the tubular member.

10 20. The method according to claim 16, further comprising the step of applying pressure to the attachment lip and the attachment overlap such that the adhesive layer is compressed.

15 21. The method according to claim 16, further comprising the step of installing a mechanical fastener that extends from the attachment lip through the adhesive layer to the attachment overlap.

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22. A method of constructing a tubular member, the method comprising the steps of:

- forming a tubular member such that the tubular member has an attachment lip and an elastically loaded attachment overlap, and the tubular member is in a
- 5 first configuration where the elastically loaded attachment overlap is in a first position not elastically deformed; and
- elastically deforming the elastically loaded attachment overlap until the tubular member is in a second configuration where the elastically loaded attachment overlap is substantially aligned with the attachment lip.

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23. The method according to claim 22, further comprising the steps of:  
applying an adhesive between the elastically loaded attachment overlap  
and the attachment lip; and  
curing the adhesive.

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24. The method according to claim 23, further comprising the step of  
installing a mechanical fastener.

25. The method according to claim 22, further comprising the step of  
10 installing a mechanical fastener.